

78. (amended) An attachment member for [use in a test apparatus for establishing an] making electrical connections [with a metal bondpad on an] for testing discrete, unpackaged semiconductor [die] dice, said attachment member comprising:

a substrate [adapted] for mounting within [the] a test apparatus configured to retain the substrate and a single die and to bias the die against the substrate;

a contact formed on the substrate including [, said contact extending from a surface of the substrate with a height to provide a desired separation between the die and attachment member mounted within the test apparatus];

a plurality of raised portions [formed on the contact, said raised portion] projecting from a surface of the contact and dimensioned [so that upon application of a biasing force by the test apparatus the raised portion] to penetrate[s] into [the] a recessed, metal bondpad on the die to a penetration depth that is less than a thickness of the bondpad while the surface of the contact [abuts the bondpad] limits further penetration; and

a conductive trace formed on the substrate [for transmitting electrical signals from an external lead on the test apparatus to the bondpad] in electrical communication with the contact.

79. (amended) The attachment member as claimed in claim 78 and wherein the substrate [is] and contact are formed of a material selected from the group consisting of silicon, germanium, silicon on sapphire, silicon on glass and a ceramic.

80. (amended) The attachment member as claimed in claim 78 and wherein the raised portions [is] are formed as [a] pointed members.

81. (amended) The attachment member as claimed in claim 78 and wherein the [contact and conductive trace are formed by semiconductor circuit fabrication techniques] raised portions have a height of about 5000Å.

82. (amended) The attachment member as claimed in claim 78 and wherein the bondpad is [embedded in] recessed within a passivation layer [and the surface of the contact abuts the passivation layer] formed on the die.

83. (amended) The attachment member as claimed in claim 78 and wherein the raised portions are formed of metal using a deposition process [is formed as an asperity using a doinking process].

87. (added) A member for making electrical connections for testing discrete semiconductor dice, said member comprising:

a substrate for mounting within a test apparatus configured to retain a single unpackaged die and to bias the die against the substrate;

a contact formed on the substrate including a plurality of raised portions projecting from a surface of the contact, said raised portions shaped and dimensioned to penetrate into a recessed metal bondpad on the die to a penetration depth that is less than a thickness of the bondpad while the surface of the contact limits further penetration; and

a conductive trace formed on the substrate in electrical communication with the contact.

88. (added) The member as claimed in claim 87 and wherein the raised portions have a height of about 5000Å.

89. (added) The member as claimed in claim 87 and wherein the substrate is ceramic and the contact and raised portions are formed by depositing a material on the substrate.

90. (added) The member as claimed in claim 87 and wherein the substrate and contact are formed of a semiconductor material.

91. (added) The member as claimed in claim 87 and further comprising a second bond pad formed on the conductive trace for wirebonding to the conductive trace.

92. (added) A member for making temporary electrical connections for testing discrete, unpackaged semiconductor dice, said member comprising:

a substrate for mounting within a test apparatus configured to retain a single unpackaged die having a recessed metal bondpad and to bias the die and the substrate together;

a contact formed on the substrate including a plurality of raised portions projecting from a surface of the contact, said raised portions having a height of about 5000Å, said raised portions configured to penetrate into the bondpad to a limited penetration depth while the surface of the contact limits further penetration; and

a conductive trace formed on the substrate in electrical communication with the contact.

93. (added) The member as claimed in claim 92 and wherein the substrate and contact are formed of a semiconductor material.